

# Cal/Ecotox Exposure Factors for Long-tailed Weasel (*Mustela frenata*)\*

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Endpoint Type	Endpoint Value	Error	Range	Units	Sex	Life Stage	Location	Note	Reference
Age at Sexual Maturity	3			mo	F	Adult	Lab	a	1
Age at Sexual Maturity			81 - 83	d	M	Adult	Lab	b	2
Body Weight - Mean	178.6			g	F	Adult	Lab	c	2
Body Weight - Mean	98.9	14.4 SD		g	F	Adult	ID; WA	d	3
Body Weight - Mean	153	3 SD		g	F	Adult	Lab	e	4
Body Weight - Mean	199.2	35.0 SD		g	M	Adult	ID; WA	f	3
Body Weight - Mean	297	36 SD		g	M	Adult	Lab	g	4
Body Weight - Mean	287			g	M	Adult	MT	h	5
Body Weight - Mean	86.2			g	F	Juvenile	Lab	i	2
Body Weight - Mean	107.6		100.4 - 116.5	g	M	Juvenile	Lab	j	2
Clutch or Litter Size	4			young/litter	F	Adult	Lab	k	6
Clutch or Litter Size			6 - 19	young/litter	F	Adult	Lab	l	1
Clutches or Litters per year	1			litter/yr	F	Adult	Lab	m	1
Clutches or Litters per year	1			litter/yr	F	Adult	MT	n	5
Dietary Composition	Microtus (52%); Peromyscus (19.5%); Eutamias (18.2%); Cynomys (2.6%); Thomomys (3.9%); Citellus (2.6%); Ochotona (1.3%); Vespula (6.5%); Tettigoniidae (2.6%)			%	NR	NR	CO	o	7
Dietary Composition	Meadow mouse (43.7%); Harvest mouse (14.5%); Deer mouse (6.3%); Mearns cottontail (10.4%); Short-tailed shrew (4.2%); Shaw pocket gopher (2.1%); Least weasel (18.8%)			%	NR	NR	IA	p	8
Dietary Composition	Meadow mouse (42.37%); Harvest mouse (24.57%); Deer mouse (11.86%); Mearns cottontail (7.6%); Short-tailed shrew (5.92%); House mouse (2.54%); Tree sparrow (1.69%); Grasshopper (0.84%); Unidentified (2.54%)			%	NR	NR	IA	q	8
Duration of Incubation or Gestation	279		205 - 337	d	F	Adult	Lab	r	1
Food Ingestion Rate	18			% body weight consumed/ d	B	Adult	Lab	s	2
Food Ingestion Rate	24			% body weight consumed/ d	B	Juvenile	Lab	t	2
Food Ingestion Rate	22			% body weight consumed/ d	B	Juvenile	Lab	u	2
Food Ingestion Rate	review				NR	NR		v	9

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Endpoint Type	Endpoint Value	Error	Range	Units	Sex	Life Stage	Location	Note	Reference
Growth Rate	see citation			g/d	B	Juvenile	Lab	w	2
Growth Rate	review				NR	NR		x	9
Home Range			200 - 300	acres	NR	NR	CO	y	7
Home Range	25			rods	NR	NR	IA	z	8
Home Range	review				NR	NR		aa	9
Metabolic Rate	0.84	0.12 SD		kcal/hr	F	Adult	Lab	ab	4
Metabolic Rate	1.36	0.2		kcal/hr	M	Adult	Lab	ac	4
Population Density	2			#/mi2	NR	NR	CO	ad	7
Population Density	4			#/160 acres	NR	NR	IA	ae	8
Population Density	review				NR	NR		af	9
Surface Area	SA = 6.04W <sup>0.73</sup>			cm2	NR	Adult	Lab	ag	4
Time of Hatching or Parturition	Apr.				F	Adult	MT	ah	5
Time of Hatching or Parturition	April				B	Neonate	Lab	ai	1
Time of Mating/ Laying	Apr. - Aug.				B	Adult	Lab	aj	1

### Notes

- a N=NR
- b N=NR
- c N=1; captured at Delta, Manitoba, Canada; total length = 352 mm
- d N=17; Nov. - Jan.; northern/central ID and Whitman County, WA
- e N=NR; captured in White Pine County, NV
- f N=46; Nov. - Jan.; northern/central ID and Whitman County, WA
- g N=NR; captured in White Pine County, NV
- h N=12
- i N=1; Age=5 wks; captured at Delta, Manitoba, Canada; total length = 265 mm
- j N=7; Age=5 wks; captured at Delta, Manitoba, Canada; average total length = 274 mm
- k N=1; captured at Tahoe City, California
- l N=NR
- m N=NR
- n N=NR
- o % occurrence in scats; N=77 scats; yr-round; Gunnison County (elev., >7500 ft)
- p % frequency in scats; N=38 scats; spring; Ames
- q % frequency in scats; N=97 scats; winter; Ames
- r N=18
- s N=7; captured at Delta, Manitoba, Canada
- t N=7; Age=8-10 wks; captured at Delta, Manitoba, Canada
- u N=7; Age=5-7 wks; captured at Delta, Manitoba, Canada
- v N=NR
- w figure of body weight (g) vs estimated age (d); N=7; Age=35 - 100 d; captured at Delta, Manitoba, Canada
- x N=NR
- y N=NR; Gunnison County (elev., >7500 ft)
- z average distance traveled from den in one night; N=NR; winter; Ames
- aa N=NR
- ab standard metabolic rate at 32C, determined from oxygen consumption; N=4; captured in White Pine County, NV; average body weight = 153 g; see citation for figure relating metabolic rate to ambient temperature
- ac standard metabolic rate at 32C, determined from oxygen consumption; N=4; captured in White Pine County, NV; average body weight = 297 g; see citation for figure relating metabolic rate to ambient temperature
- ad N=NR; Gunnison County (elev., >7500 ft)
- ae N=NR; winter; Ames

## Exposure Factors for Long-tailed Weasel (*Mustela frenata*)

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af N=NR  
ag equation relating surface area (SA, cm<sup>2</sup>) to body weight (W, g), estimated from skin area; N=NR; captured in White Pine County, NV  
ah N=NR  
ai N=NR  
aj N=NR

#### References

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- 9 Sheffield, Steven R. and Howard H. Thomas. 1997. *Mustela frenata*. *Mamm. Species.* 570:1-9.

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